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SUMMARY

Six plus years of biotech industry experience in therapeutic antibody development, hybridoma and phage display technologies, antibody engineering, immunoconjugate therapies and proteomic technologies

EMPLOYMENT

Millennium Pharmaceuticals, Inc. Cambridge, Massachusetts

2001-2002 Senior Scientist, Antibody Technologies

Responsible for advancing Millennium's biologic drug discovery pipeline in Oncology. Integrated a combination of antibody technology platforms for biologic drug discovery including Xenomouse, HuMab, SLAM and Phage Display.

Head of molecular library technology group. Led Millennium in establishing high through put automated screening of phage display libraries to generate antibodies and peptides as affinity reagents and surrogate ligands to support Millennium's functional genomics as well as biotherapeutic antibody programs.

1998-2000 Scientist, Protein Sciences

Intimately involved in Millennium's business discussions and technical collaborations with external companies possessing antibody-based technologies.

Intralimmune Therapies, Inc. Boston, Massachusetts

1996-1998 Research Scientist

Senior member of research team focused on development of anti-her2/neu antibodies for non-viral gene delivery technology.

Established Intralimmune's phage display capabilities for rapid isolation of recombinant antibodies for "intrabody" technology.

Engineered monoclonal antibodies specific to pulmonary endothelial angiotensin converting enzyme for targeted gene delivery to the lungs.

Harvard Medical School/Massachusetts General Hospital
Boston, Massachusetts

Research Fellow, Antibody Engineering
1993-1996

Investigated hapten affinity and specificity of anti-phenylarsonate monoclonal antibodies (germline and somatically hypermutated)

Designed, constructed and screened Fab phage display libraries to study modulation of antibody affinity and specificity

Laboratory lead in molecular modeling based on X-ray crystal structure of antibody-antigen complexes.

EDUCATION

University of Houston
Houston, Texas
PhD Biochemical Engineering
1988-1993

Mapped the "chromatographic epitope" of rat liver cytochrome b5 by empirical use of the stoichiometric displacement model as well as by computational brownian dynamics algorithms.

Validated MicroCal's early titration microcalorimeter prototype to measure stoichiometry and ΔH of cytochrome b5 adsorption as well as of antibody-antigen binding using anti-lysozyme monoclonal antibody HyHEL5.

Reported a computational homology model for the 3-D structure of rat liver cytochrome b5.

Indian Institute of Technology
Kharagpur, India.
Bachelor of Technology (Honors) Chemical Engineering
1984-1988

PUBLICATIONS

1. D. S. Gill, D. Qian, X. Xiong, M. Jandrot-Perrus*, K. Nagashima, K. McDonald, J. Tonra, A. Goodearl and J. Villeval "Anti GPVI human antibodies neutralizing collagen-induced platelet aggregation isolated from a combinatorial phage display library", in preparation.
2. Y-W Wong, D. S. Gill, B. Parhami-Seren, M. K. Short, S. R. Sompuran and M. N. Margolies, "Structural requirements for a specificity switch and for maintenance of affinity using mutational analysis of a phage-displayed anti-arsenate antibody of Fab heavy chain first complementarity-determining region" Journal of Immunology, **160**(12), 5990 (1998).

3. D. S. Gill, Y-W Wong and M. N. Margolies, "Differences in sequence specific expression of two anti- arsonate Fabs in E. coli", Biotechnology Progress, **13**(5), 692 (1997).
4. D. S. Gill, D. J. Roush, K. A. Shick and R. C. Willson, "Microcalorimetric characterization of the anion-exchange adsorption of cytochrome b5 on Mono Q", Journal of Chromatography, **715**, 81 (1995).
5. D. J. Roush, D. S. Gill and R. C. Willson, "A Preferred HPLC Anion-Exchange Chromatographic Contact Region for Recombinant Rat Cytochrome b5", Journal of Chromatography, **704**, 339 (1995)
6. J. J. Ramsden, D. J. Roush, D. S. Gill, R. Kurrat and R. C. Willson, "Protein Adsorption Kinetics Drastically Altered by Single Point Mutation" Journal of the American Chemical Society, **117**(33), 8511 (1995).
7. D. S. Gill, D. J. Roush and R. C. Willson, "Tertiary Structure of the Heme-Binding Domain of Rat Cytochrome b5 based on Homology Modeling", Journal of Biomolecular Structure and Dynamics, **11**(5), 1003 (1994)
8. D. S. Gill, D. J. Roush and R. C. Willson, "Presence of a preferred anion exchange chromatographic binding site on cytochrome b5: structural and thermodynamic considerations", Journal of Chromatography, **684**, 55 (1994).
9. K. A. Hibbits, D. S. Gill and R. C. Willson, "Isothermal Titration Calorimetric Study of the Association of Hen Egg Lysozyme and the Anti-Lysozyme Antibody HyHEL-5", Biochemistry, **33**(12), 3584 (1994)
10. D. J. Roush, D. S. Gill and R. C. Willson, "Electrostatic Potentials and Electrostatic Interaction Energies of Rat Cytochrome b5 and a Simulated Anion-Exchange Adsorbent Surface", Biophysical Journal, **66**(5), 1290 (1994)
11. D. S. Gill, D. J. Roush and R. C. Willson, "Adsorption Heterogeneity and Thermodynamic Driving Forces in Anion Exchange Equilibria of Cytochrome b5", Journal of Colloid and Interface Science, **167**,1 (1994)
12. D. J. Roush, D. S. Gill and R. C. Willson, "Anion-Exchange Chromatographic Behavior of Recombinant Rat Cytochrome b5: Thermodynamic Driving Forces and Temperature Dependence of the Stoichiometric Displacement Parameter Z", Journal of Chromatography, **653**, 207 (1993)

13. D. S. Gill, D.J . Roush and R. C. Willson, "Ion Exchange Adsorption of Proteins: Contact Regions and Thermodynamic Driving Forces", *Proceedings of Topical Conference on Separation Technologies*, American Institute of Chemical Engineers, New York, 532 (1992)

**HONORS
AND
AWARDS**

Cancer Research Institute Postdoctoral Research Fellowship, 1994
W. H. Peterson Award, American Chemical Society, 1993
Cullen Graduate Fellowship, University of Houston, 1989